

BALD HEAD ISLAND SETTLEMENT MONITORING SURVEYS
REPORT 5
NOVEMBER 2005

Introduction

The 5th set of monitoring surveys for the Settlement Agreement between the Village of Bald Head Island and the United States Army Corps of Engineers was taken in November 2005. The criteria to be used in examining the surveys is to be a continuous passage through Smith Island Channel, Baldhead Shoal Channel Reach 1 and Baldhead Shoal Channel Reach 2 with a minimum bottom width of 500 feet at a depth of -42 feet mean lower low water (mllw).

Data

The 4th set of monitoring surveys taken in September 2005 is displayed in Figure 1 and is labeled September 2005 Surveys. Figure 2 is a plot of surveys taken in November 2005 and Figure 3 is a difference plot between the September and November surveys.

A plot for Smith Island Channel of the navigable widths at a depth of -42 feet mllw (navigable depth) is shown in Figure 4. MLLW is 2 inches lower than mlw at Bald Head Island. A plot of the minimum channel cross section at station 13+00 is shown in Figure 5. The baselines for the cross section plots are shown in Figure 1.

A plot for Baldhead Shoal Channel Reach 1 of the navigable widths at a depth of -42 feet mllw is contained in Figure 6. Plots of the minimum channel cross sections in the vicinity of the spit at stations 19+00 and 20+00 are shown in Figures 7 and 8.

A plot for Baldhead Shoal Channel Reach 2 of the navigable widths at a depth of -42 feet mllw is contained in Figure 9. A plot of the minimum channel cross sections at stations 45+00 is shown in Figure 10.

Conclusion

The minimum navigable width at a depth of -42 feet mllw exceeds 500 feet in all three channels.

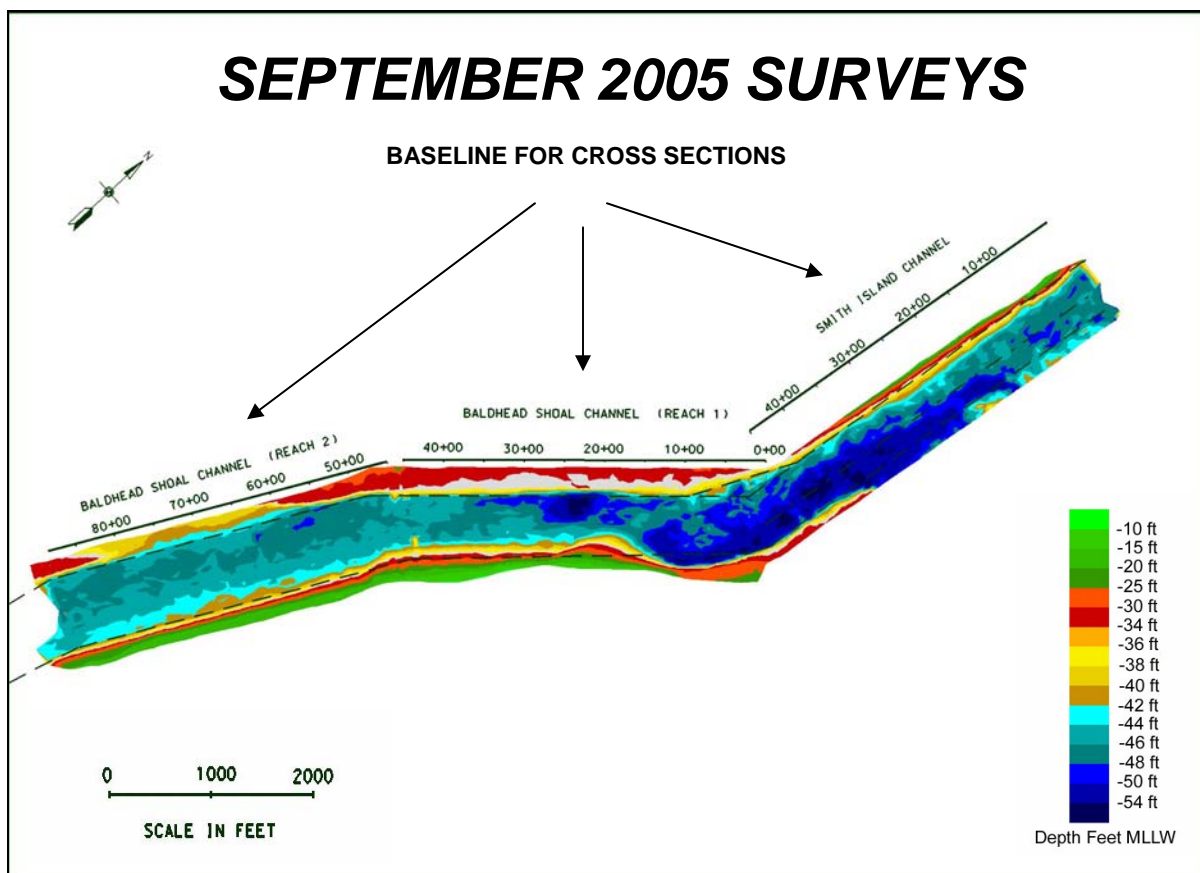


Figure 1 September 2005 Surveys

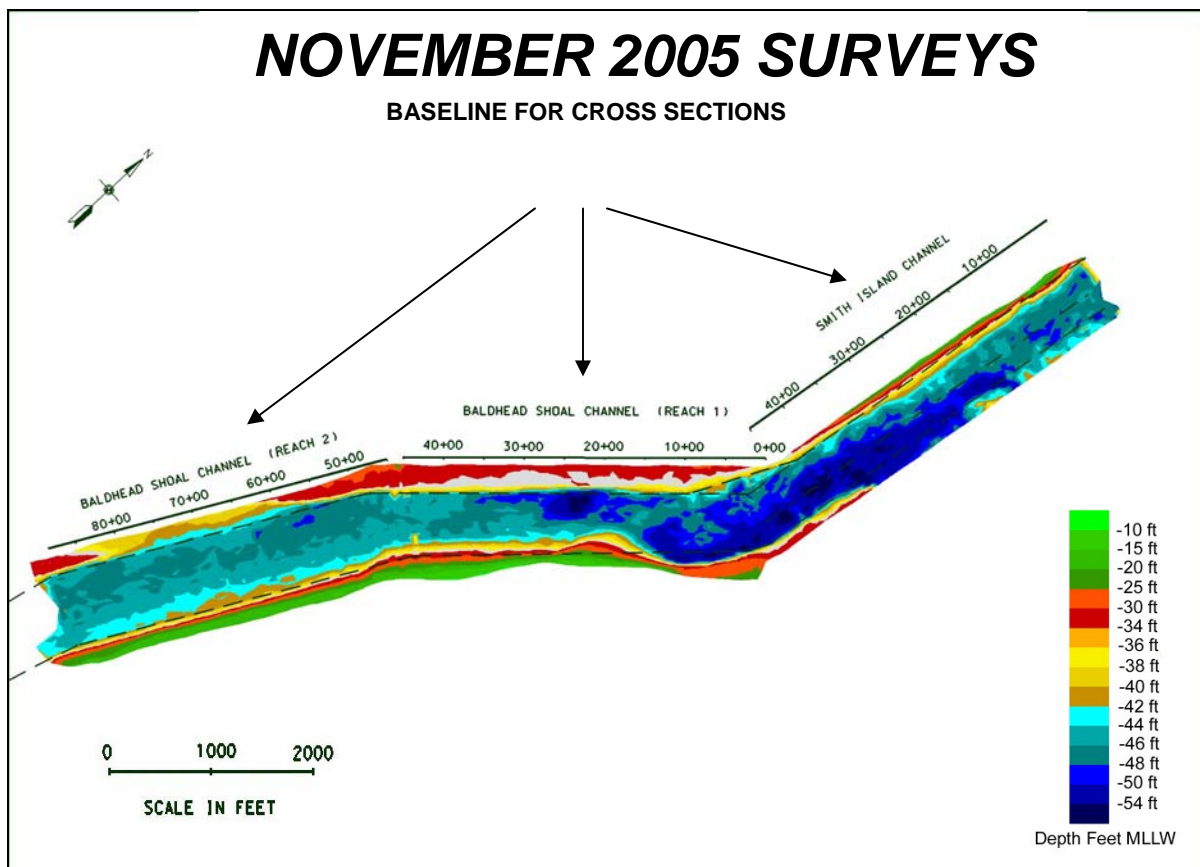


Figure 2 November 2005 Surveys

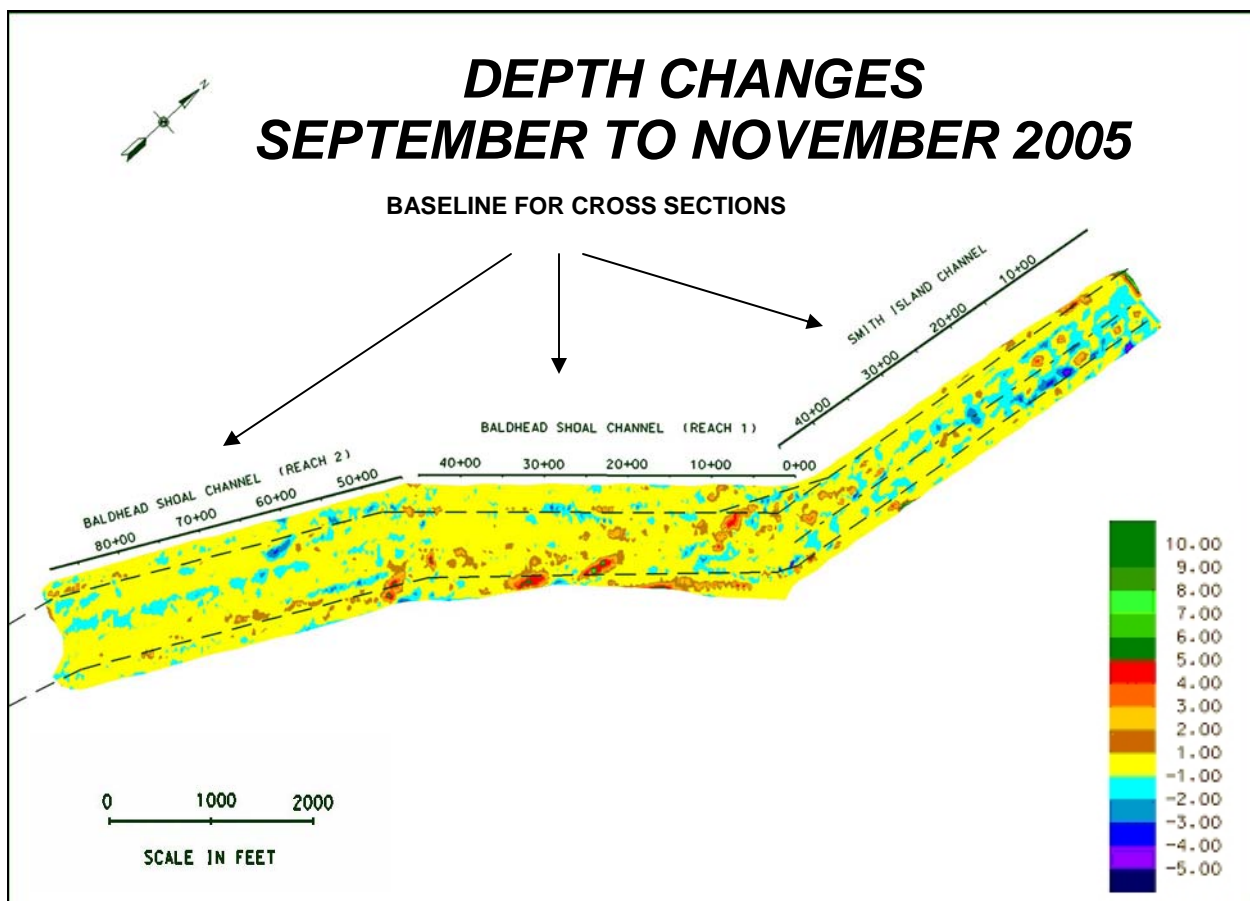


Figure 3 September to November Depth Changes

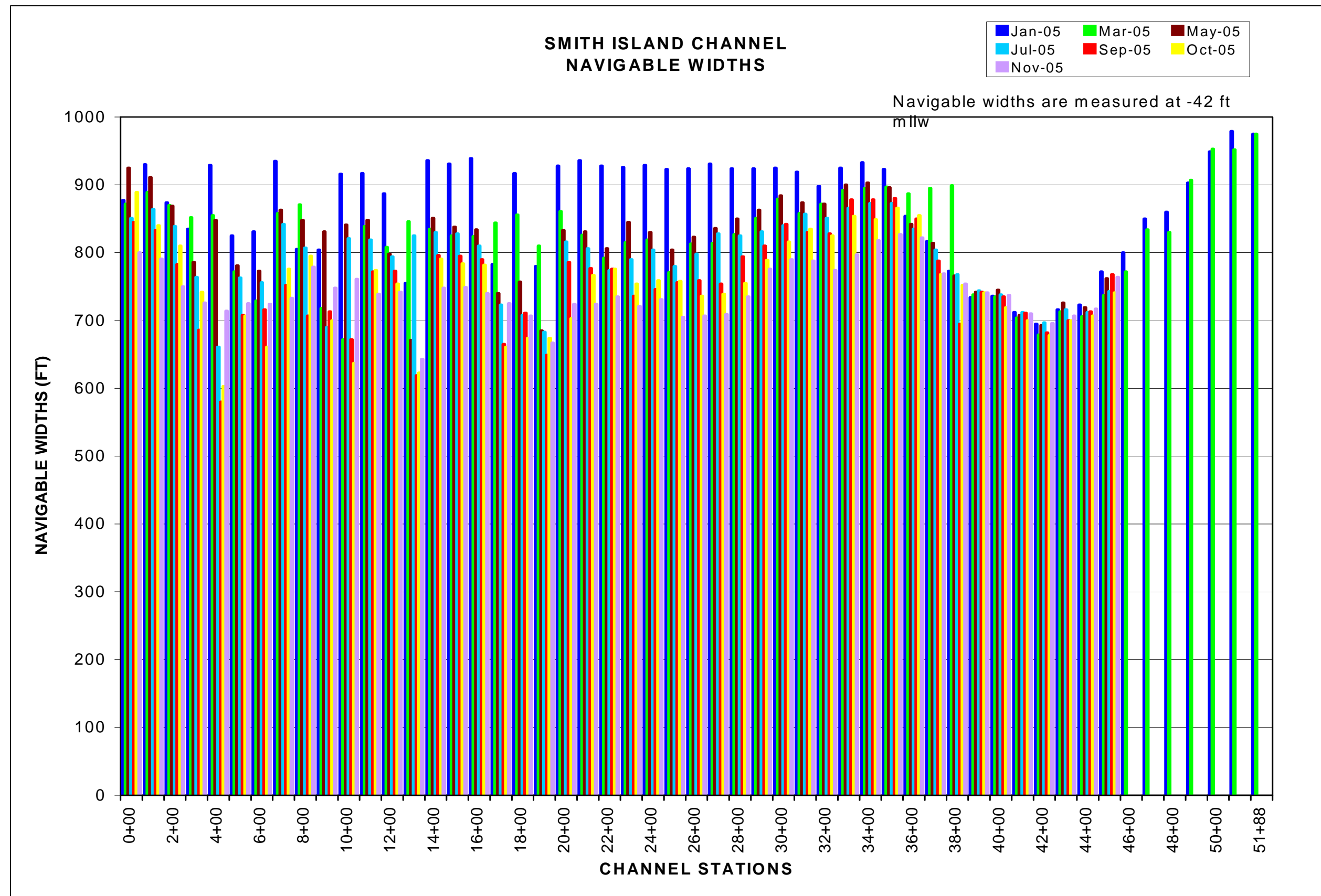


Figure 4 Smith Island Channel Navigable Widths

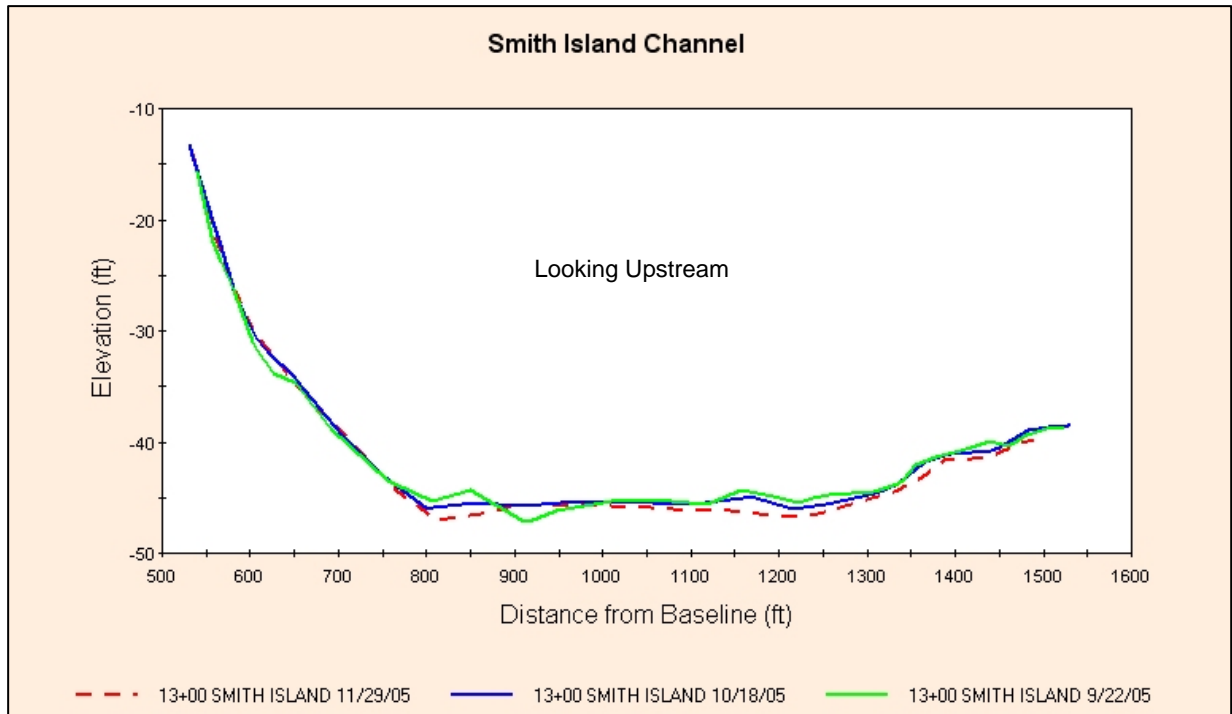


Figure 5 Smith Island Channel Station 13+00

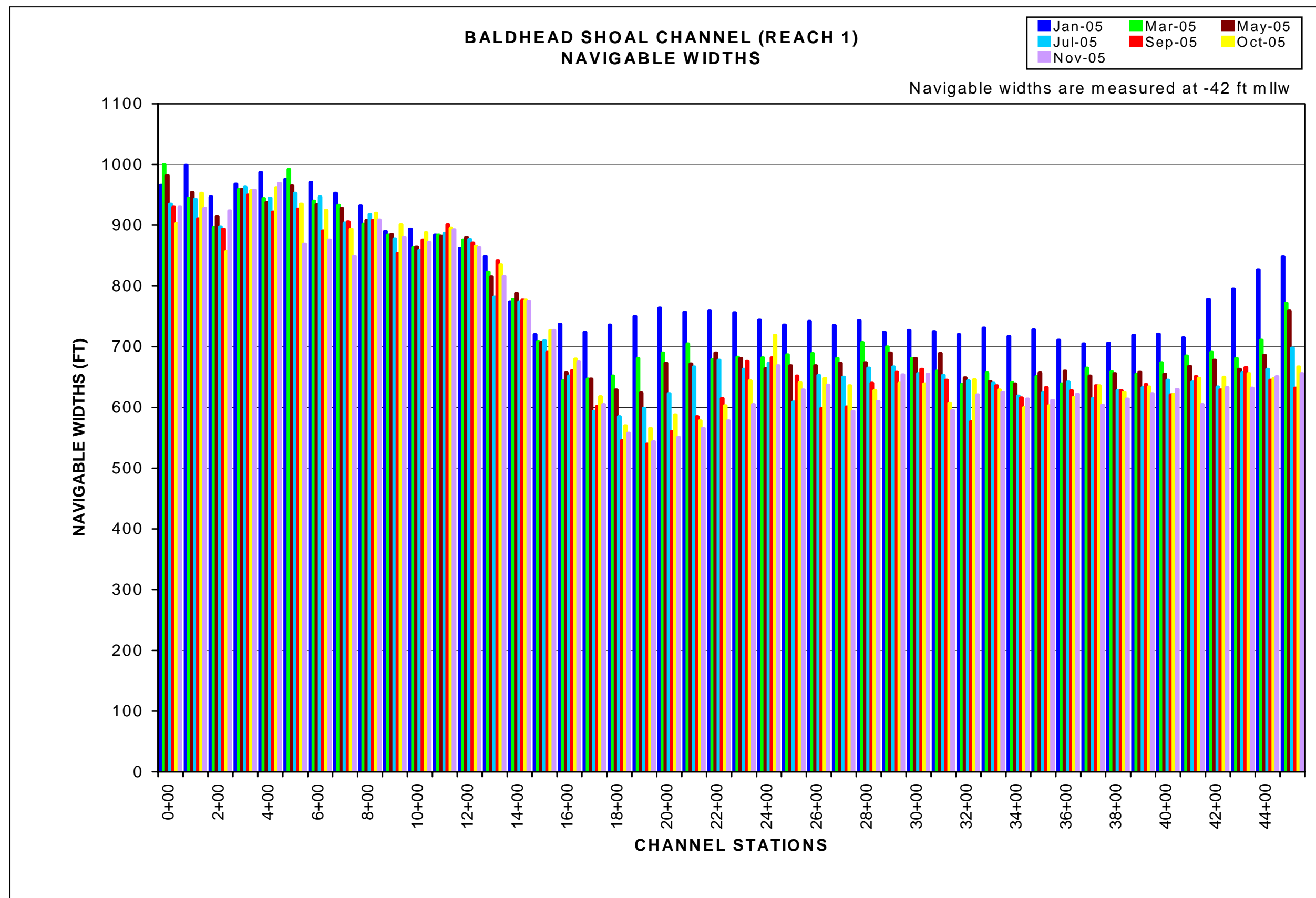


Figure 6 Baldhead Shoal Channel Reach 1 Navigable Widths

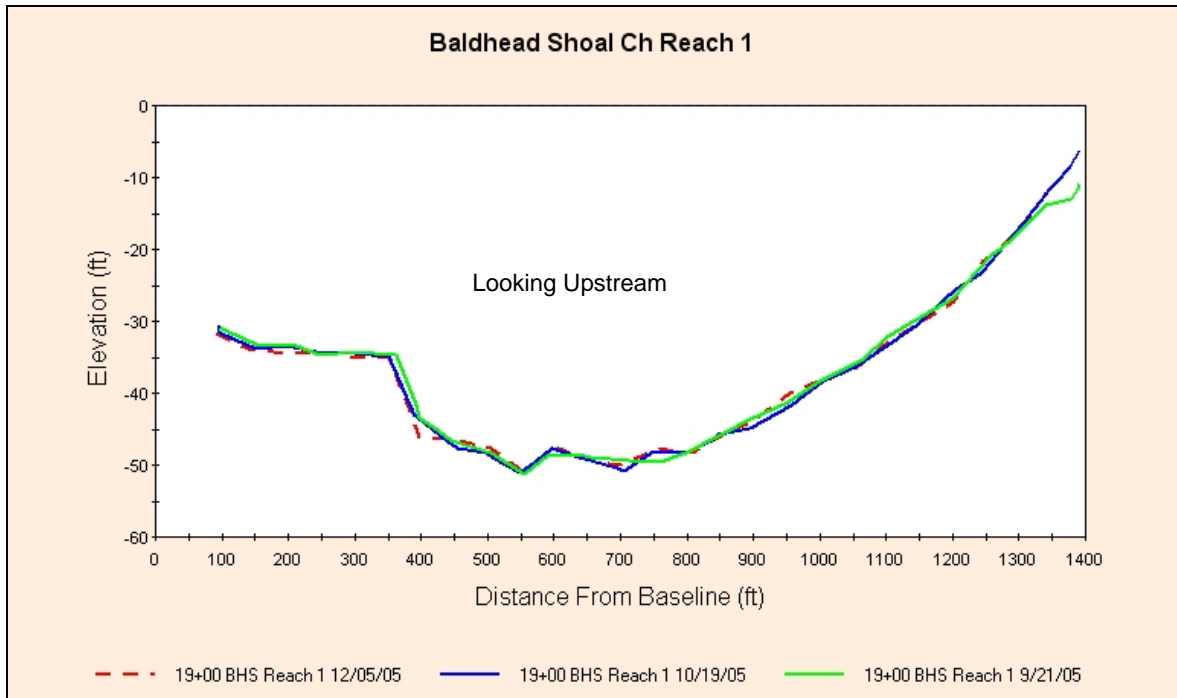


Figure 7 Baldhead Shoal Station 19+00

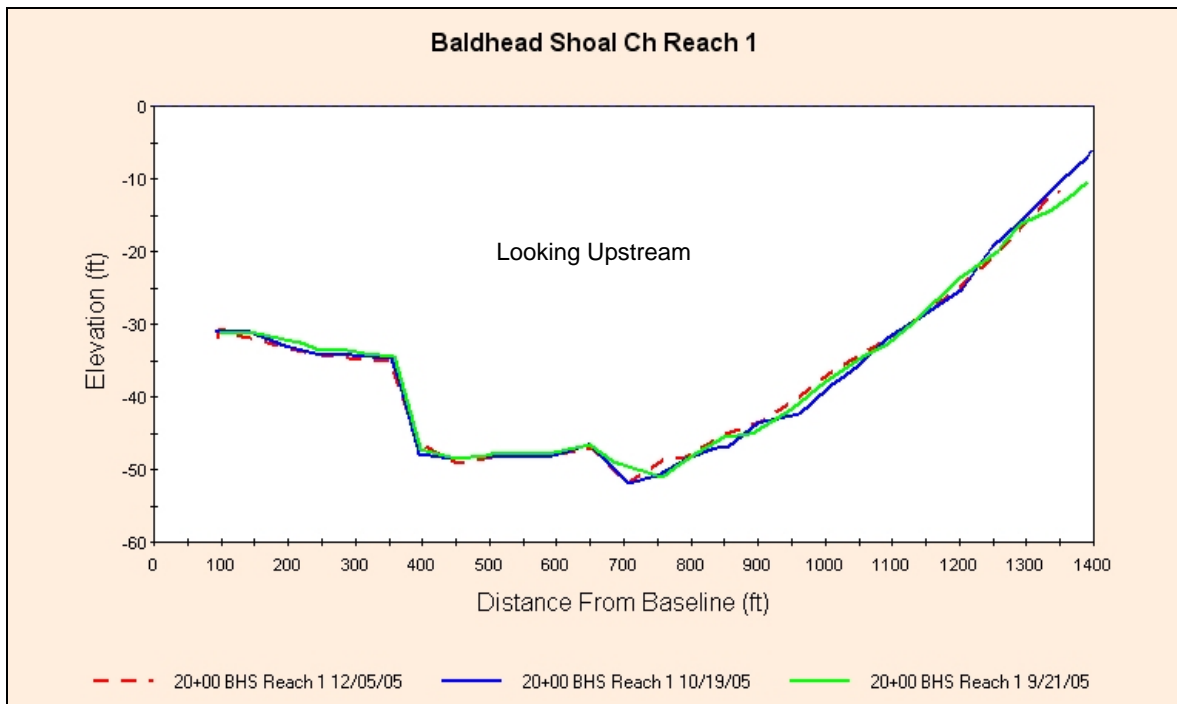


Figure 8 Baldhead Shoal Station 20+00

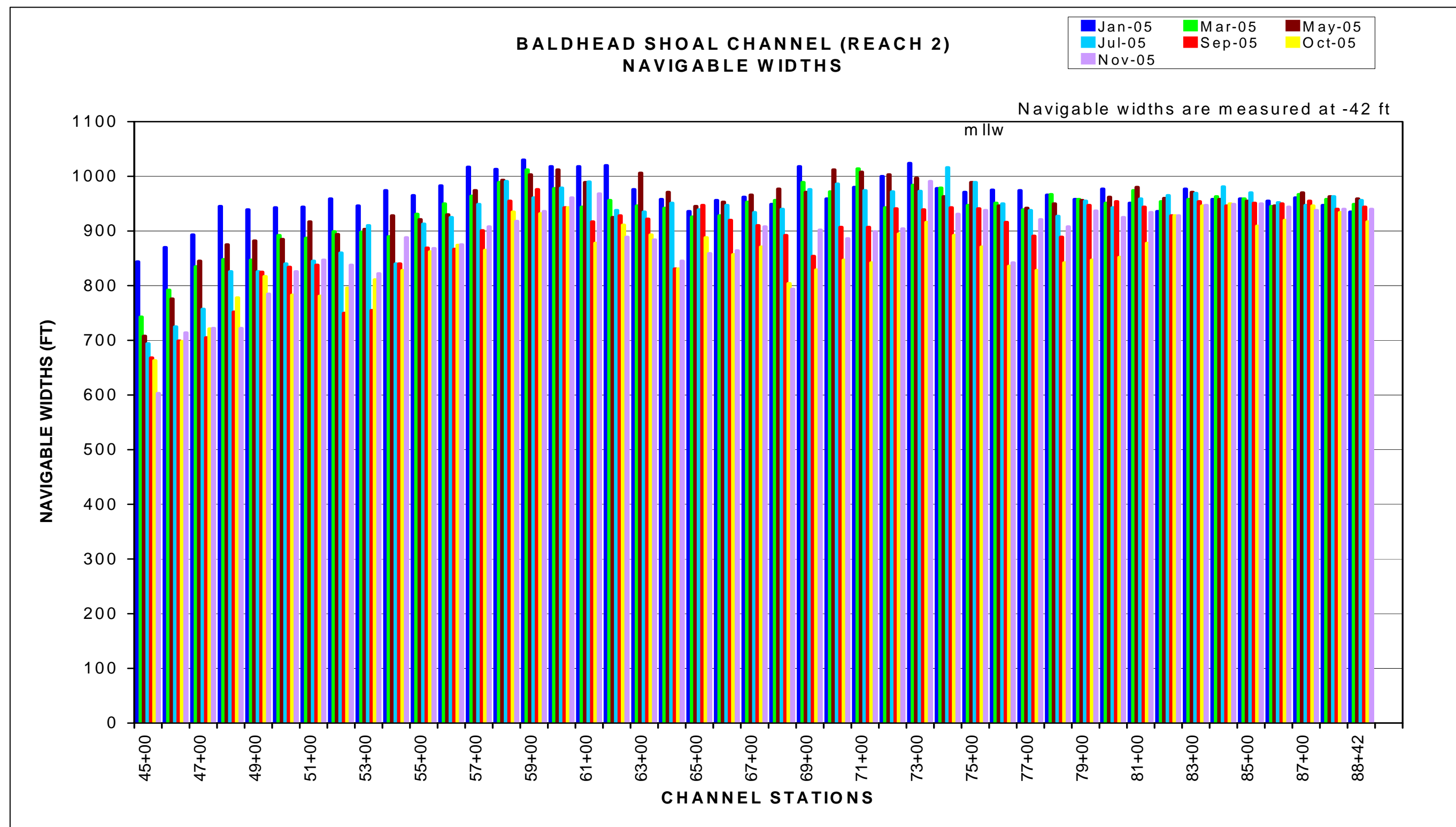


Figure 9 Baldhead Shoal Channel Reach 2 Navigable Widths

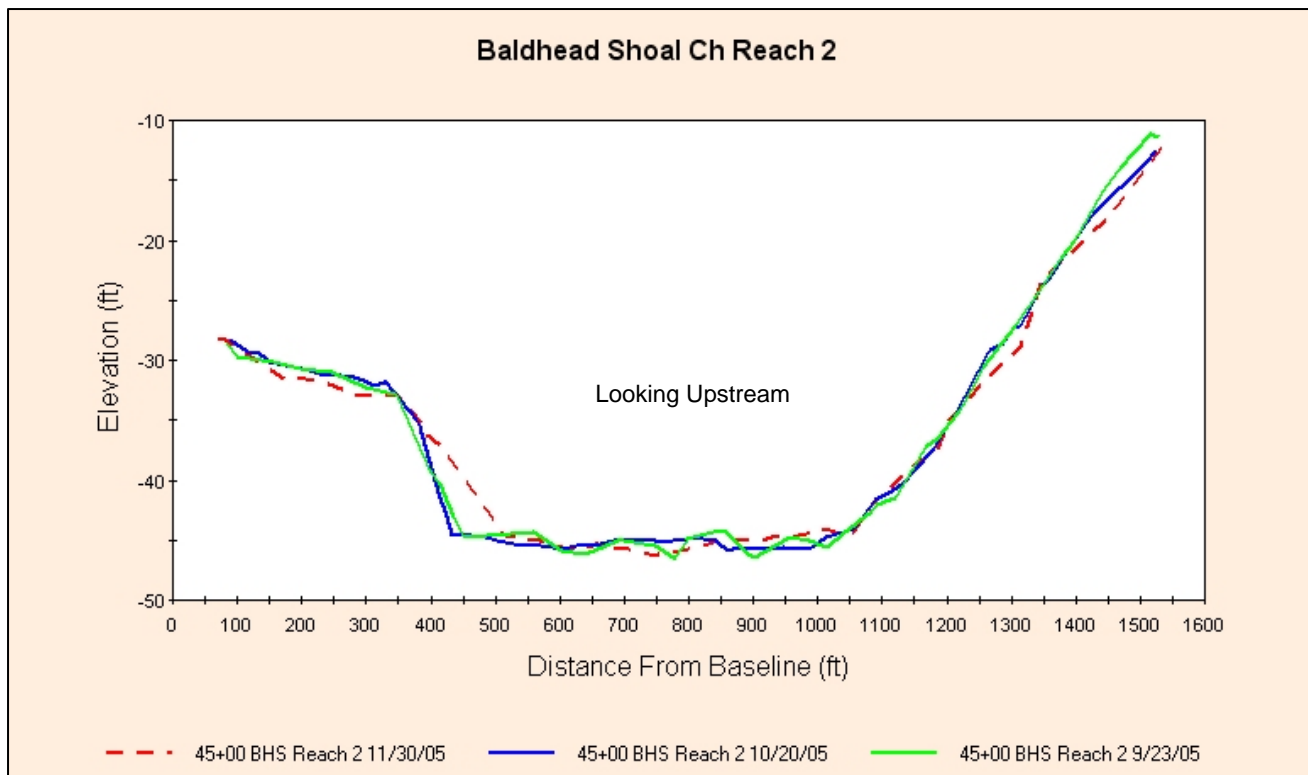


Figure 10 Baldhead Shoal Station 45+00